Remarks/Arguments

The Office Action of December 5, 2004 and the references cited therein have been carefully studied and reviewed, and in view of the foregoing Amendment and following representations, reconsideration is respectfully requested.

Claims 6 – 20, drawn to the non-elected invention, are canceled without prejudice or disclaimer of their subject matter.

Claim 1 has been amended, and new claims 21 - 25, drawn to the elected invention, have been added so as to more clearly patentably distinguish the present invention over USP 6,924,180 to Quek.

More specifically, claim 1 sets forth that the entire bottom surface of the L-shaped spacer 151 delimits the air gap A1, i.e., that the **entire bottom surface of the L-shaped spacer 151 is exposed**, as clearly shown in FIG. 2. Such a feature is important in its effect on the fringe parasitic capacitance C_{gf}. That is, an air gap A1 along the entire bottom of the L-shaped spacer in a device according to Applicants' invention of claim 1 will reduce the parasitic capacitance between the source/drain region and the gate electrode by a significant amount compared to a device in which a material having a necessarily higher dielectric constant is interposed between the bottom of the L-shaped spacer and the source/drain region (paragraph [0025] of Applicants' original specification).

Quek discloses the latter type of device. More specifically, Quek discloses a device having a composite spacer 11/7/8 (FIG. 4) that is disposed on the thermal

oxide layer 4 grown on the region of the substrate 1 occupied by the source/drain region. The component 8 of the composite spacer is removed so that a deep pocket implant region 10 can be formed, which is the aim of the invention of Quek. In this respect, refer to col. 1, line 60 to col. 2, line 4 and col. 4, lines 32 – 37. By happenstance, the wet etch process used to remove the spacer component 8 (col. 8, lines 42 – 49) appears to leave the distal end of a lateral portion of the nitride spacer component 7 projecting from the lateral portion of the oxide spacer component 11. This gap between the distal end of the lateral portion of the spacer component 7 and the substrate 1 is shown in FIG. 5, as pointed out by the Examiner in the Office Action, although the specification includes no written description of this feature.

Regardless, in the resulting device of Quek shown in FIG. 5 or FIG. 6, a substantial amount of the oxide spacer component 11 covers the bottom surface of the nitride spacer component 7. Thus, even if the nitride spacer component 7 were considered to correspond to Applicants' L-shaped spacers 151, and the oxide spacer component 11 were considered to correspond to Applicants' support portions 142, the device of Quek would not read on amended claim 1. In particular, the entire bottom surface of the nitride spacer component 7 of Quek is not shown as or otherwise described as being exposed. Accordingly, the Quek reference can not anticipate claim 1 under 35 USC 102.

Claim 21 also distinguishes the structure of Applicants' device over that disclosed by Quek. Specifically, claim 21 recites that the gate pattern 200 and the

support portions 142 are disposed over a region of the substrate confined between lightly-doped source/drain regions 171. On the other hand, the oxide spacer component 11, considered by the Examiner to correspond to Applicants' support portions 142, overlies the region of the substrate containing the lightly doped source/drain regions 5. Thus, the Quek reference does not anticipate new claim 21.

For these reasons, namely because of the differences between Applicants' invention, as is now claimed, and the references, including the lack of disclosure in Quek of a semiconductor device in which an air gap exists between the entire bottom surface of an L-shaped spacer and the source/drain region over which the lateral portion of the spacer extends, and of a semiconductor device in which portions that support L-shaped spacers on the sides of a gate electrode are present over a region of a substrate located between lightly-doped source/drain regions, it is seen that the reference to Quek does not anticipate Applicant's claims under 35 USC 102. Accordingly, early reconsideration and allowance of the claims are respectfully requested.

Respectfully submitted,

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